

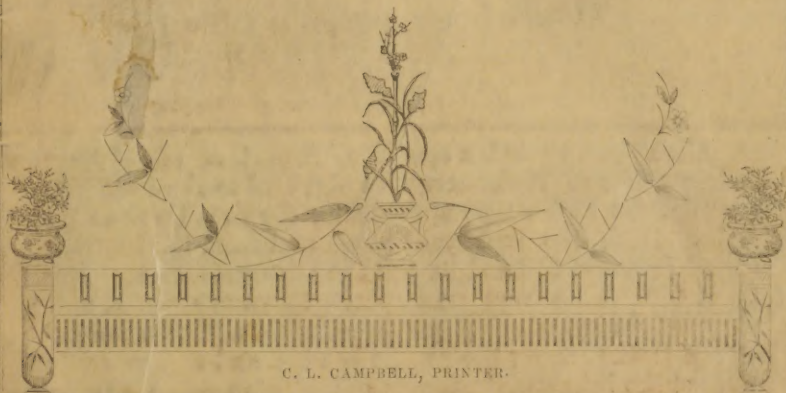
Dr
Backley
Jamaica

1883

REPORT
OF THE
✓
COMMISSIONER OF HEALTH.



KINGSTON, JAMICA.



C. L. CAMPBELL, PRINTER.

ERRATA.

At page 4, last line, for "affected" read *effected*.

At page 29, the 19th line of paragraph 62, for "were seen in the Town" read were *never* seen in the Town.

R E P O R T
OF THE
COMMISSIONER OF HEALTH.

*Office of the Commissioner of Health, Kingston,
31st December, 1883.*

TO THE HON. H. J. KEMBLE, CHAIRMAN OF THE LOCAL BOARD
OF HEALTH, KINGSTON.

Sir,

I have the honor to present to the Local Board of Health, my Report for the year ended 31st December instant, in which is shewn the nature as well as the amount of sanitary work performed during that period, under the direction and supervision of the officers of the Board.

2. I feel satisfaction in stating that, during the year, there has been an extraordinary exemption from severe forms of sickness among the inhabitants, that no diseases of the zymotic class occurred in epidemic form, and that although yellow-fever prevailed for several months in an adjacent Island, the city was not invaded by that disease. I shall, hereafter, shew by reference to the mortality returns prepared by the Registrar-General of Births and Deaths, that so far as the death-rate, as well as the causes of deaths stated in the returns, may be regarded as an index of the sanitary condition of the city, there is not much cause for complaint.

3. The same routine work of scavenging has been carried on daily, and as in former years, a large quantity of refuse matter has been removed from the thoroughfares, private yards, and unenclosed lots of land, and conveyed to the place of deposit, all of which work was performed under the direction and supervision of the Inspectors of Nuisances.

It will be seen by reference to the return marked A, that 2,481 cart-loads of refuse matter have been taken from the places mentioned, to the deposit ground in West Street, added to which is the further large quantity taken daily from the streets of Rae's Town, Brown's Town, Alman Town, Hannah's Town and Smith's Village, the exact quantity of which cannot be ascertained, as its removal was effected by means of wheel-barrows and hand-carts.

4. At the commencement of the year, the work of removing the debris on wharves and other places at the lower part of the city, where the fire of the 11th December 1882 had destroyed so many buildings was actively carried on, and it required not less energy than determination on the part of the officers of the Board to have this accomplished. There was difficulty in inducing some of the owners and occupiers of premises, on which such debris was found, to have it taken away, and although there was a little delay, it was eventually removed. Whilst the work was going on, the emanations from certain wharf premises, where large quantities of animal and vegetable matter were lying in a state of decomposition was intolerable, and the effluvium was experienced even in the upper part of the city. These heaps of foul, offensive matter were removed in large boats or barges to a spot far to leeward in the harbour, where it was deposited. Disinfecting and deodorizing agents were freely employed whilst it was being taken away and after its removal, and all risk of danger to the public health fully guarded against.

5. About this period, a considerable portion of the time of the Inspectors of Nuisances was devoted to the filling of latrine vaults, which were exposed after the fire. To the 31st December 1882, 183 had been filled, and from that date to the end of January, 263 underwent the same process, making a total of 446. This was an important sanitary work, and in view of the possibility of the effluvium from such exposed vaults disturbing the public health, and endangering the lives of the inhabitants, it was of importance to fill them

rapidly, and accordingly special attention was given to the work.

6. It may be said that, notwithstanding the insanitary conditions which followed the conflagration, and their extent as well as formidable character, no particular sickness was induced among the inhabitants, and this no doubt resulted, in great degree, from the active measures that were taken, and the precautions used for the abatement of nuisances that were so dangerous to health. At such a crisis, the public were alive to the danger, and some observant persons in the community addressed letters to the Board on the subject, but at the time they wrote, the strongest efforts were being made to have the city free of these insanitary conditions.

7. I may observe incidentally, with reference to the locality where the work of destruction by fire was so great, and where before its occurrence, the building arrangements generally were not calculated to secure a proper degree of sanitation, that the stores and offices which have been erected, are of more approved style and character, and in many instances, have been constructed with due regard to proper ventilation, and to the laws which influence health.

8. Seeing that the greater portion of the buildings at the lower part of the city, extending from East Street to West Street, had been destroyed, and that the re-erection of them must sooner or later take place, I addressed a letter to the Board in the month of February calling their attention to representations I had made in my reports of the insanitary condition of the latrines that had been in use in that quarter, and to the fact that, from their mode of construction, they afforded facilities for collections of water, thereby keeping in a state of dilution, the excretal matter contained in them, and causing at all times a noxious effluvia to be emitted. In this locality, water may be found at a few feet below the surface, and in many places there are springs, so that the frequent emptying of them is of little avail, inasmuch as after this process, water soon collects, and there is a recurrence of the nuisance. I therefore suggested to the

Board that in building latrines in that locality, they should be so constructed, as to prevent the possibility of such evils arising from them. I observe that in the "Kingston Building Law 1883," a clause has been inserted, and rules laid down for the observance of persons who may build latrines on the site of the fire of 1882, and that a plan of building has been directed, in accordance with my suggestions. I, however, fear that through delay in the passing of the Act, some latrines have been built upon the old principle, and if so, that there will be a return of evils, which it is of the highest consequence to prevent.

9. Of the latrines throughout the city, 198 were cleaned during the year, by direction of the Inspectors of Nuisances, of which, 100 were cleaned through written notices and orders served on householders, and 98 through verbal orders—67 were cleaned voluntarily by householders, making a total of 265. Of the 198, 19 on the premises of poor persons were cleaned by order of the Board, under the provisions of the 17th Section of Law 6 of 1867, 198 notices and orders were served upon householders to have their latrines cleaned, and 85 notices to have others disinfected.

10. Although there are still 17 cesspools in the thoroughfares, they are little used by householders, who have found it more convenient and economical to allow bath and other surplus water to run direct into the water-tables. Formerly cesspools in Kingston were sources of great atmospheric vitiation, and the Inspectors of Nuisances had much difficulty in getting the occupants of houses to keep them clean and in order. The presence of cesspools in the streets does not improve their appearance, and whenever used, invariably cause insanitary conditions. Their abolition will no doubt be determined, when the reconstruction of the streets commences or the work is in progress. During the year, it was not necessary for the Inspectors of Nuisances to direct that any be cleaned—3 were altogether abandoned and filled.

11. I have to remark, with regard to the thoroughfares, that whilst such a degree of repairs has been affected

from time to time as to render them safe for the passage of vehicles, it must be admitted that they are still in an unsatisfactory state. Every day, the necessity for their reconstruction becomes more manifest, and with reference to the important work to be performed, what points most to its urgency is, the extremely bad state of the water-tables of some of the streets, and the still worse condition of the lanes. The surfaces of several of the streets are lower than the water-tables, and they form water-courses, so that when the latter are being flushed, or there is a downfall of rain, the principal body of water is seen running down over their surfaces, instead of at their sides along the tables, which were specially intended as surface drains. In the present condition of the water-tables, they seem only to serve the purpose of collecting mud and stagnant water, and of favoring the rapid and luxuriant growth of grass. Nothing can be more unsatisfactory than the condition of these water-tables, and they are a source of trouble and anxiety. In consequence of the numerous complaints made about the foul smell arising from them, I have watched carefully the movements of the persons employed by the Road Board to flush and clean them, and noticed how completely, after the process has been gone through, they have been cleared of mud and stagnant water. And yet it is a matter of observation that, notwithstanding such effectual cleansing, after the lapse of a few hours, and before water, in any quantity, has passed over their surfaces, there is again a strong and disagreeable effluvium from them. As night approaches, this smell becomes unbearable, and the result is that there is an impression among many of the citizens, that there is indifference about such a nuisance, and that no regard is had for the public health. To say the least of it, this is an exceedingly erroneous impression. The truth is, as I have on previous occasions stated, that the subsoil of the water-tables for some depth below is thoroughly percolated with foul water, a process that has been going on for many years, and it cannot be approached or influenced by any flushing that might be carried on, and it is from this source that the exhalation proceeds. It is evident that this nuisance can only be abated by taking up the water-tables, removing the offen-

sive soil from underneath, and reconstructing them upon a proper principle. The original, bad construction of these water-tables allows of wide interspaces between the stones which are filled with earth, from which, under what has become a fertilizing soil, grass grows with rapidity, obstructing the flow of any water that might be poured into them, and causing collections of mud and stagnant water. It is evident that the Officers of the Road Board have much difficulty in clearing the streets of this grass, as it grows quickly after it has been removed, and this particular work must cause a large expenditure of money.

12. For the reasons mentioned, it is clear that, on sanitary and other grounds, the work of reconstruction cannot with safety be longer delayed, and I have no reason to believe that the Board entertain a contrary opinion. The matter has now become urgent, and it must be deemed so, when the public health is becoming more and more endangered through insanitary conditions which result from causes that cannot be removed by ordinary maintenance, but only by a thorough and complete reconstruction of the streets.

13. In touching upon the question of the reconstruction of the thoroughfares, I may observe that there is less cause for complaint about those portions of the principal streets, that are situated between North Street and East Queen Street. Although in a better condition than other streets, they may to a certain extent need repairs or even reconstruction, but there is not at any time a large quantity of foul water found lodging in them, and this in great measure is due to the fact, that water from the baths of the majority of householders in that part of the city is not allowed to run into the streets, but into the lanes. But it may be said of the lanes, whether they are wholly or partially paved or are unpaved, and of the cross-streets which have never yet undergone any proper construction, and are consequently without paved water-tables, that they require immediate attention, and this for reasons previously mentioned. When, therefore, the work of reconstruction is about to commence, I may state with deference, that it seems desirable that

operations should be first carried on in the lanes—at all events, in those which are found to be in the worse condition.

14. One more remark I think it right to make with regard to those lanes that are unpaved, and it is, that in the process of flushing them, as now conducted, or in the ordinary removal of mud, which is necessarily done frequently, there is by degrees a gradual yet appreciable sinking or deepening of the surfaces, so that eventually so much material will have been removed, that in raising them and restoring their proper gradient during reconstruction, the expense of the work must be proportionately increased. It is not improbable that this circumstance has not escaped the notice of the City Surveyor, but it might be regarded as one, among other reasons, why the work on the lanes should have early consideration.

15. In the 9th paragraph of my Report for the year 1881, because of the connection which exists between the sanitary state of the city and the proper maintenance of the thoroughfares, I drew attention to the amount of damage done by vehicles of every description, driven into Kingston almost daily from the adjoining parishes, among them drays, waggon and carts, some heavily laden and therefore doing much injury to the streets, the owners or drivers being under no obligation to contribute towards their repairs. It is unlikely that the work of reconstruction will be completed before the lapse of a few years, but in the mean time, that of repairing must continue, for the streets and lanes generally cannot be neglected, whilst such a work is being proceeded with, and operations are confined to a defined or limited portion of the city. Judging from the present condition of the streets and lanes, and seeing the state in which they have been for some time past, it is fair to conclude that the funds at the command of the Board have scarcely been adequate for their proper maintenance. They must deteriorate in condition, and for their repairs, a large amount of money will be required every year.

16. Among the upper classes of society, many engaged in business pursuits in the city reside in adjoining parishes,

and of necessity, come in daily and return home in the evening. Nearly all of these keep vehicles, which run over the streets, and do more or less damage to them. Such persons are exempt from the payment of any rates for street purposes, and it might not be too much to ask that they should contribute their quota towards the expense of maintenance of the thoroughfares. It must be understood that I exclude altogether any who may be transient visitors. Reverting to the traffic with carts, waggons and drays, whilst some are from the adjoining parishes, others, particularly carts used in the fruit trade, are from a greater distance. All combined do an inconceivable amount of damage to the streets, and there seems no reason why the owners of such vehicles should not also be required to give something towards their repairs. The majority of householders in Kingston, who keep no vehicles—neither carriages nor cars—have to pay for the repairs and maintenance of the streets, which are to a very great extent damaged by wheel traffic at the instance of persons, who contribute nothing towards such repairs.

17 The Inspectors of Nuisances have directed attention to the cleaning of enclosed and unenclosed lots of land in the city. Of this latter, there are about 456. They are not only sources of atmospheric impurity, on account of the luxuriant vegetation with which most of them abound, and the emanations which under certain conditions arise from them, but in certain localities, they are made the receptacles of every description of filth, thrown into them by a class of persons who regard them as convenient places of deposit. I am not aware that anything has been done by the authorities, with a view to the fencing and enclosing of any of these lots of land. The undertaking would be expensive, and I doubt if there are any funds at the disposal of the Municipal Board for carrying out such work. It cannot be too strongly impressed that, whilst these unenclosed lots of land detract from a decent appearance, they are the foci of much that is likely to contribute towards the unhealthiness of the city. During the year 110 lots were cleaned by direction of the Inspectors of Nuisances, of which, 9 were en-

closed and 101 unenclosed, 59 notices and orders were served upon householders to have certain lots cleaned.

18. In a worse condition than these unenclosed lots of land are the several abandoned burial grounds in the city, some of which, imperfectly enclosed, are overgrown with trees and bush, and have gone into a state of complete jungle. A list of these grounds, with a statement of their condition, is being prepared, and it will shortly be forwarded to the Board. Under the 32nd section of the "Kingston Cemetery Law 1874," the Municipal Board is required to maintain in decent order grave-yards, in which under an Order in Council issued, there has been a discontinuance of burials, and to do the necessary repairs of the walls and other fences thereof, and it is further directed under the same section, that the cost of such maintenance and repairs shall be paid by that Board, out of the moneys to be received by them under the provisions of this Law.

19. Unless, therefore, there are funds available now from the Cemetery for carrying out the provisions of the Law, and whenever at any future time, the grounds may require cleaning, it is evident that in regard to this important sanitary work, the section in question must be deemed altogether inoperative. So far as my observation goes, and from the information I have received, I believe that neither at present, nor prospectively, are the Municipal Board likely to have sufficient money from the source contemplated, to enable them to do with these grounds what the Law requires. The question then arises—what is to be done with them? From day to day they must acquire a still more insanitary character, and become more potent in the exercise of a dangerous influence upon the public health. Under the circumstances, would it be expedient for the Municipal Board to apply to the Government for aid?

20. The closure and abandonment of burial grounds in Kingston was only a partial movement by the Government, and a large number of interments still take place in grave-yards in the city, which are connected with certain places of worship. It is to be presumed that the amount received

for such interments is far in excess of that which would be required for cleaning the respective grounds, and therefore, through what may be regarded as a diversion of funds, it is not surprising that the moneys received for interments in the Cemetery should prove not only insufficient for the proper maintenance of the place, but for the purpose of carrying out the requirements of the Law, with regard to disused burial places.

21. If I have been correctly informed, a marked diminution of the amounts received at the Cemetery, is attributable to interments having taken place in burial grounds that are still in use (whether from choice or from prejudice on the part of relatives or friends against the Cemetery is not known) of the bodies of persons, who were wholly unconnected with the Churches to which such grounds are attached. I mention this circumstance, in order to show that if it were contemplated by the Government, when framing the Act, that the funds to be derived from the Cemetery would not only be sufficient to pay all contingent expenses, but enough to meet the cost of repairs and maintenance of the abandoned burial grounds, there was a miscalculation, for the result is that whilst burials were interdicted on all those grounds, with a view to overcoming and preventing insanitary conditions, these have increased in a manifold degree, and the Municipal Board are powerless to combat with them. All these difficulties might have been avoided, if it had been declared in the Act that after a stated time, intramural burials should cease in Kingston, and that all interments should thereafter take place in the public Cemetery.

22. It is scarcely necessary to again enumerate the several matters, in regard to which some action should be taken with a view to effecting further sanitary improvements in Kingston which are mentioned in former reports, and to which I have drawn the attention of the Board. I would again ask their attention to those reports, and if the suggestions I have made in them be considered of any importance, as calculated in any way to improve the sanitary

state of the city, that the Board will give them their consideration.

23. I think it right, however, to state with reference to the matters adverted to, that such practices as the washing of clothes in private yards, the establishment of grave-yards about the city, the tethering of stock on unenclosed lots of land and in private yards, where also people who come to Kingston for marketing purposes, there being no proper accommodation, domicile and sleep, and from which they suffer physically and morally, whilst insanitary conditions result, the vending of provisions, fruit and vegetables in the public thoroughfares, which are converted into so many market places, as well as many others mentioned in the reports, all of which are objectionable, and are sources of danger to the public health. It is desirable that they should be prohibited, under the force either of Legislation, or of stringent Municipal regulations.

24. Success has not attended the measures that were adopted for the abatement of the nuisance caused by the carrying on of the fruit trade in Kingston. The steps that were taken to enforce the regulation, passed by the Governor in Privy Council in December, 1881, and particularly the section relating to the sweeping daily of certain portions of the thoroughfares in front of places of business, and the removal by persons conducting such business, of refuse matter so swept to the place of deposit, proved unavailing. I communicated to the Board, on the 24th September, that the several persons to whom the regulation applied, refused to notice it, and expressed their determination not to comply with its requirements. They assigned as a reason for so refusing, that each and all of them contributed yearly, through sanitary rates fixed by the Board, towards the expenses attendant upon the performance of such work of scavenging, and accordingly they shewed the most strenuous opposition to the regulation.

25. It must be remembered that the object of the application that was made by the Municipal Board to the Government was, to have such a regulation passed as would

enable them to deal with traders in fruit, who through a lax system, in common with those who bring cart-loads of fruit to the city, notwithstanding all remonstrances, cause large quantities of trash to be left piled in heaps in certain thoroughfares and on wharves, and also that the Board having framed a regulation, bearing specially upon this question, and forwarded it to the Government for approval and adoption, that which has proved inoperative was substituted and having been approved of by the Governor in Privy Council, was sent down to the Board.

26. No progress therefore has been made towards the abatement of this trash nuisance, and believing that the suggestions I offered in last year's Report, as to the mode of procedure most likely to prove practicable and effective in determining its abatement, I have again to urge on the attention of the Board, the remarks I made on the subject in paragraphs 15, 16, 17 and 18 of that Report. I see no prospect, as I have previously stated, of anything being done in this matter, until responsibility is fixed somewhere. There is no difficulty in dealing with ordinary litter, swept from dwellings or places of business, and improperly deposited in any thoroughfares, but with such refuse matter, the regulation unnecessarily deals. Under bye-laws of the Local Board of Health, framed in accordance with the 14th section of Law 6 of 1867, householders and others are directed in what manner it shall be dealt with. They are aware that a penalty attaches to any infraction of these laws, and in this matter, the officers of the Board, in the discharge of their duties, have never met with difficulty. Again, the work of scavenging is carried on under their direction, the streets are swept regularly, and the ordinary refuse matter removed by the contractors for such work to the place of deposit. But in the matter of cart-loads of trash thrown and left in the streets or on wharves, sometimes as many as 20 or 30 carts will be seen in a street supplying one dealer, or on one day, about 100 fruit carts may be observed in different parts of the city. Such a regulation as that in force is not adapted to the requirements of the Board, and cannot fail to be otherwise than inoperative. The fact is, that persons keeping stores

or other places of business in any street, before whose premises these carts are drawn up in line, and where trash is thrown, complain of a nuisance, which under the regulation they themselves are required to abate.

27. Apart from this being a sanitary question, in the 16th paragraph of my Report for 1882, I stated that through the carelessness of the drivers of carts, or of persons loitering about the locality (probably using matches carelessly, whilst smoking) there was reason to apprehend damage from fire, when such large quantities of dried trash are left in the streets day and night. Since that Report was presented, it has become a more general practice to allow fruit dealers to leave heaps of such trash from fruit carts on certain wharf premises, and at mid-day on Sunday the 25th March, a quantity of banana and plaintain trash left at the Prince's Wharf by certain dealers, was found on fire, but fortunately many persons being near the spot, who gave prompt and active assistance, it was extinguished before it could extend to the wharf buildings, or houses in the neighbourhood.

28. As far as I can make out, there are now 6 fruit dealers in Kingston—the number has diminished from 1882, but those engaged in the trade seem to be carrying on more extensive business, so that notwithstanding this diminution, it is not improbable that about the same or even a larger quantity of fruit is now brought to the city for exportation. Many persons, in districts not remote, are cultivating bananas and looking after other fruit trees, so that the fruit trade is likely to increase, and in course of time, a still larger number of fruit carts will be brought to Kingston. Bearing this in mind, and having in view the present state of things, the Board cannot at too early a period take steps to prevent the sanitary and other evils that arise out of the carrying on of this trade in Kingston. There can be no desire to adopt a course, which would in any way tend to embarrass the fruit dealers. On the contrary, they should know that the Board would be rather disposed to encourage the further development of the trade, than to place obstacles in their way, but it is the province of the Board to see that the comfort and health of the inhabitants are se-

cured, and that under the circumstances, precautionary measures be taken against the occurrence of fire.

29. Inspections have been made periodically of the Market Places, Slaughter House and Livery Stables, and they have generally been found in a cleanly state. As usual, the Victoria Market still maintains the ascendancy for cleanliness, and it is satisfactory to be enabled from year to year to make this statement. There are no places in which insanitary conditions more quickly arise, but such is the system adopted in this Market, where there is a constant and full supply of water, that with zeal and attention on the part of the Clerk in charge, such conditions are effectually guarded against.

30. The Solas Market remains in much the same state, and although it has undergone some repairs, from its construction, want of space and lack of convenience, it is ill adapted for the purposes of a market. It is, however, kept in as clean and orderly a state as circumstances will allow, but I imagine that at no distant period, a proper market building will be erected on a more approved site, and sufficiently large for the accommodation of the numerous persons who go there from the country, many of whom vending provisions etc., are obliged, for the want of such accommodation, to do so in the streets. This practice, with that indulged by similar vendors within and around the uncovered enclosure north of the Victoria Market, is most reprehensible. Seeing how large a portion of this Market was unoccupied, I made particular reference to the practice in my last Report, and suggested in what way I thought the evil might be overcome. I am still of the same opinion, and again recommend that the Board should use necessary means to have it abolished, and thereby prevent nuisances dangerous to health that arise therefrom.

31. With regard to the state of the public health during the year, an examination of the abstracts of Births and Deaths, registered at the office of the Registrar General, shews that the deaths are in excess of the number registered in 1882. In 1881, they amounted to 963, of which, 291

occurred in the public institutions. In the present year, the total number of deaths registered is 1,272—418 of them having taken place in those institutions. In the first 11 months of 1882, the deaths averaged 77 per month, but in December they were as high as 124. From January to June of this year, they averaged 128 per month, and in the last six months, ended 31st December, 84 per month. During the former period, there were no marked meteorological conditions, which it was considered were likely to determine such a degree of unhealthiness in the city, and it was inexplicable why there was such an increase in the number of deaths from December 1882 to June 1883.

32. It is a striking feature in the Registrar-General's Returns that, at no period of the year was any extraordinary number of deaths registered, as having occurred from diseases of the Zymotic class, and certainly, at no time was there evidence of any threatening or of the actual existence of an epidemic of such diseases. The total number of deaths from Fever, and the forms of fever, as registered, from which they took place, is as follows: from Infantile Remittent Fever, 1 death—undistinguished, of which 3 were not medically certified, 19, Malarial, 8, Enteric, 2, Bilious, 1, Intermittent, 5, Typhoid, 7, Remittent, 8, Malignant Malarial, 4 Continued, 1 and Yellow Fever, 1 death. The greatest number of deaths from fever occurred in February and March, when there were 7 in each month. The average in the other months of the year was a fraction over 3 per month. The death from Yellow Fever took place in the month of September, at a house in East Queen Street. The young man who died, was a native of the country, and lived in Kingston. Some surprise was felt at the announcement of his death from such a form of fever, as natives are rarely, if ever, attacked with the disease, unless it be raging in severe epidemic form, and then most commonly, those only are liable to attacks, who reside in cooler or actually cold districts, and who at such a time may visit any locality in the lowlands, when they may be brought under the influence of the Yellow Fever poison. Besides the death from Yellow Fever registered in September, there were only three other

deaths from fever registered in that month viz : from Malarial Fever 1, Intermittent 1, and continued fever 1. I make these remarks, because such an occurrence was unusual and remarkable, and especially as there was an entire exemption from the disease among Europeans residing in the city, some of them not acclimated and therefore presumably more susceptible than a native of the poison of Yellow Fever. The deaths from Fever in 1832 amounted to 59, whereas in the present year, notwithstanding a higher death-rate, 48 deaths were registered.

33. As I stated before, the mortality from Zymotic diseases was not high. Throughout the year, 7 deaths from Diphtheria were registered. In the months of May, June and July, 1 death occurred in each month : in October, 2, November, 2 and in December, 1. Diphtheria appears under peculiar circumstances, as attacks of it occur as frequently in dwellings that are favorably situated, where there are no insanitary conditions, and there has been no communication by the inmates with persons elsewhere suffering from the disease, as in houses that are dilapidated and damp, with rotten walls, and which are unfit for human abode. There were 14 deaths from Measles in March, April and May, 6 of which were not medically certified. The attacks must have been of unusually severe character, as ordinarily, this is not regarded as a fatal disease. Some of the deaths no doubt occurred from severe pulmonary complications. Two deaths from erysipelas, not medically certified, occurred in the months of February and August. Looking over the Registrar-General's Returns, it is certainly noteworthy that in Kingston, not free from marked insanitary conditions, with a population of 36,846 persons, a large proportion of this number badly housed and fed and ill-clad, so few deaths should take place from diseases of this class.

34. The number of deaths from infantile diseases was 301, of which 80 were registered under the head "not medically certified". In 1832, the number was 224. The diseases of which these children died are not specified, but it would be of statistical importance if such information could be obtained. If the majority had medical attendance, it may be pre-

sumed that the 80 not medically certified, had no more care than was bestowed by parents and relatives or friends. The causes of infantile mortality, and of the large number of deaths that occur, are matters worthy of consideration, and I made some remarks on the subject in last year's Report. According to the returns, of the 301 deaths of children, 269 were of infants under 1 year of age. This must be looked upon as an alarming mortality.

35. Whilst such a number of deaths, from infantile diseases, adds seriously to the mortality in the city, there are other diseases which occur annually, and increase the death-rate, among which Phthisis Pulmonalis takes a prominent place. There were 150 deaths from this disease during the year, of which 80 were not medically certified—in 1882, there were 141 deaths. There is an increased number of deaths from brain disease—in 1882, it was 47, this year it is 68, being an increase of 21 deaths. If the causes of deaths in the public institutions were specified, it would be found that a large number of these deaths take place in the Lunatic Asylum. It will be seen by reference to the returns that whenever there is a comparatively high mortality in any month in the Asylum, the deaths registered from brain disease are also in proportionate number.

36. At the early part of the year, there was much diarrhœa and dysentery in the city, but the cases of the latter were fewer in number. The cause was ascribed to certain states of the atmosphere, and these were noticed by Mr. Maxwell Hall, in his Weather Reports. The ranges of temperature at that period were favourable to the development of these diseases. Among the poorer classes, they are too frequently caused or aggravated by the wretched character of their habitations, to overcrowding in them, dampness, the want of proper ventilation, and the use of food not of the best or most sustaining quality. During the year, 37 deaths from diarrhœa, not medically certified, were registered, and 17 for dysentery. In 1882, there were 27 deaths from diarrhœa and 11 from dysentery, so that there was an increase of deaths from these diseases.

37. It was noticed, at different periods of the year, that

an unusually large number of deaths took place among persons advanced in years, to what cause attributable was not made clear, but it did not escape notice and public comment. The mortality list has been considerably added to by these deaths, and they have increased materially the death-rate of the city. I find by the returns that 82 died at the age of 65 years, 63 at 75 years, 37 at 75 years, and 22 at the age of 95 years, making a total of 204.

38. In determining the actual death-rate in Kingston, whilst it is proper that the number of deaths that took place in the public institutions should be deducted from the total number registered, and that upon the remainder it should be calculated, it is also right that it should be known what were the causes of deaths in them respectively. I have expressed an opinion with reference to deaths from brain disease, that the majority registered took place in the Lunatic Asylum. So with regard to deaths from diarrhœa, dysentery, fever and the few other Zymotic diseases, from which there were deaths, it would be of importance to know where they occurred. In considering the question, as to whether or not all such diseases were brought about by alleged insanitary conditions of the city, it would be impossible, with the imperfect knowledge possessed, to arrive at a correct decision. As previously shewn, the total number of deaths registered was 1272; but deducting 418, the number that took place in the public institutions, the death-rate in Kingston would be calculated upon 854 deaths, it would then be 23.1 per thousand of the population.

39. The city, throughout the year, was free from any epidemic spread of diseases of a dangerous and infectious character, so that the Hospital for such diseases was closed and unoccupied. Yellow Fever prevailed at different periods in the Island of Cuba and also at Baltimore, and they were declared to be infected places. Quarantine was accordingly established against their ports. With the exception of a single death registered from this disease, a case which occurred in a native of this Island, there was no other in the city. The keeping out of the Island of diseases of such a character, by means of an efficient quarantine, whilst an

adjacent Island was being depopulated by its ravages, is a matter which can only be regarded with the highest satisfaction.

40. During the year, alarm was felt at the prevalence of Cholera in epidemic form in Egypt, and in different European Countries, it was dreaded that the disease would pursue its westward course, and all possible safeguards were used by means of an active and rigid quarantine to prevent its introduction into them. Fortunately, it did not extend, but confined itself to the country where it appeared, where a very large number of persons succumbed to the disease. Nor was there an absence of fear even at this distance as to the possibility of its finding its way to Kingston, and doubtless the Government and the Sanitary Boards were alive to the importance of taking active steps, if necessary, to guard against its introduction into the Island.

41. With reference to Zymotic diseases, and the appearance of any in the city of a highly dangerous and infectious character, I have in my reports dwelt upon the importance of an early notification of a case of such disease appearing in any dwelling, so as to enable the Sanitary Board to advise or adopt precautionary measures, with a view to the prevention of its spread among the inhabitants. I suggested also in those reports that, with regard to such cases, the Board should, for the same reasons, be empowered under the Sanitary Laws, to enforce judiciously yet effectually, the isolation of such persons. If a Law had been in operation in 1874, under which isolation could have been enforced, small-pox would in all probability have been stamped out, before it committed such fearful ravages in Kingston and throughout the Island. What may be regarded as permissive or voluntary isolation in any dwelling would be quite insufficient for the purposes in view, and unless the Board are armed with power to enforce it, when in any case objections are raised, and the patient is allowed to be freely communicated with by other inmates of the house or visitors, there will be no likelihood of a spread of the disease being prevented. I repeat that the early notification to the Sanitary Board, of the presence in any dwelling of a case of dis-

ease of a highly contagious and infectious character, and the prompt and effectual isolation of such a case, are the only certain means by which a check can be given to the dissemination of such diseases.

42. I have to remark that in former reports I have referred to the condition of the dwellings of the poorer classes of the community, and I do so again, because of my own belief and of the opinion of many persons, that from the wretched character of several of such dwellings, the health, and even the life of those who inhabit them is jeopardized. It may be safely stated that certain diseases are induced, their progress accelerated, and it is to be feared, death occasioned, by the domiciliation of many poor persons in some of the miserable tenements that are to be found in different parts of the city. If correct statistics could be obtained, it would be seen that, of the causes which contribute to such a high rate of mortality among children, none are likely to be more prominent than the insanitary conditions which are inseparable from such tenements. One cannot avoid observing that, in some of the principal cities of England, the condition of the dwellings of the poor has for some time past engaged, and is now still more actively engaging, the attention of Statesmen and Philanthropists. This leads to the hope that in Kingston, at no distant time, some measures, Governmental or Municipal, will be taken for the amelioration of the condition of the poor of the city.

43. Under the provisions of the 1st section of Law 22 of 1882, entitled, "The Board of Health Law Amendment Law," the Sanitary Officers are empowered to act in a particular manner, whenever it shall appear that any dwelling-houses are so over-crowded, as to be dangerous or injurious to the health of the inmates. I trust it will not be found impracticable to carry out the provisions of this Law, as to the manner in which the nuisance of overcrowding shall be abated, but it cannot be unnoticed that in dealing with a case, after giving an order for the abatement of the nuisance, and stating the maximum number of persons who shall be allowed to sleep in or otherwise occupy the premises, when

there is such overcrowding, it may be an extremely difficult matter for the occupier or other person in charge thereof to know what to do with the number of inmates declared by the Sanitary Officer to be in excess, probably, all members of a family, and the majority, children. Then, this is a penal clause, and for disobedience of any order given by a Sanitary Officer, there is a penalty not exceeding 40s. and in case of a second offence, to a penalty not exceeding five pounds.

44. The total rainfall in Kingston during the year, as registered at No. 78 East Street, was 31.97 inches—in 1882, it was 19.59 inches. Although there was an increase upon the past year of 12.36 inches, the average rainfall of former years was not attained. There was an absence of the usual season rains in May and October, in the former month, it was 1.52 inches, and in the latter, 4.38 inches. The highest rainfall was in the month of August, when it was 6.85 inches, and the lowest in February and December, the fall in each month being 0.22 inches. From January to the end of July, the total rainfall was 11.33 inches, and as in the latter month there was some fear of the water supply to the city being deficient, whilst householders were supplied with the usual quantity, a restriction was placed upon that allowed for the flushing of the thoroughfares. A return of the rainfall, marked B., is appended to this Report.

45. I have to observe with regard to the Water Supply to the city, that it is given in abundance to householders, and of the quality, no complaints have been made. It cannot, however, have escaped observation that there is a great waste of water, and this is in great measure the consequence of the supply being superabundant. Many householders are indifferent about the quantity that runs from their premises day and night into the streets, frequently from damaged cocks or pipes, and then there are the floods of water, which are pouring into them from baths at all hours of the day, deluging the streets, and causing not only discomfort to the inhabitants, but determining insanitary conditions.

46. In a former Report I suggested with regard to the mode of disposal of water from baths, when it is not requir-

ed for gardening or other purposes, that certain hours should be fixed upon for its escape from the different dwellings in the city. Whilst the unpleasantness of wading across streams of water, at all hours of the day, would be avoided, a simultaneous discharge, within certain hours, of such a large quantity of water would subserve the important purpose of flushing the water tables, and cleansing them of all mud or stagnant water, which they may contain.

47. In the month of July 1882, in consequence of a drought in the earlier months of the year, it became necessary for the Water Works Commissioners to limit the supply of water to Kingston. Accordingly, for some weeks, the supply was taken off from 9 o'clock a.m. to 3 o'clock p.m., daily. Householders made no complaints, they stored away enough for domestic purposes, and for gardening purposes the supply was ample morning and evening. I believe that no harm, but much good resulted. The streets and lanes were less deluged with water, and there was a very marked diminution of the mud and stagnant water that were previously observed in them. No disadvantages resulted, therefore, when an intermittent was substituted for a continuous supply of water.

48. I am unable to express an opinion which would be of any weight, with regard to the carrying out of the intermittent principle, in the same manner as in July 1882, but without limit as to time. Here, the question of supply for fire purposes comes in the way, and I confess my inability to deal with it: nevertheless, I think that the matter might be considered by the Board, and some steps taken to limit the supply, when there would be less water, and less flooding of the thoroughfares.

49. The Inspectors of Nuisances reported during the year at the Water Works Office, any flow of water seen in their respective districts, from damaged pipes or cocks in yards, or from broken pipes in any streets or lanes, and they remonstrated with persons who were found allowing water through neglect, to run therein from their premises. They

reported 60 cases of such water escapes, being 20 below the number last year.

50. For infractions of the Sanitary Laws, in 6 cases, the Inspectors of Nuisances instituted proceedings in the Police Court, and the return marked U, shews the nature of the offences for which the several persons were summoned before the Police Magistrate. These were of the ordinary kind, and the few offenders so dealt with were of the humbler classes in the community—and commonly they had shewn resistance, and disregarded the notices and orders served upon them to abate nuisances. As a rule, however, it is pleasing to observe that the inhabitants, generally, shew greater willingness than formerly to correct sanitary evils, which may exist on or about their premises, whenever called upon to do so. This may be attributed to a more general knowledge possessed by householders of their duties, and of the responsibilities that attach to them under the force of the Sanitary Laws.

51. The number of complaints made through written communications amounts to 45. A return, marked D, shews the number and character of these complaints, which were made by householders and others in the city. Attention was generally given to them by the officers of the Board, and when of a just character, were promptly and effectually dealt with. Some complaints were made by persons who misconstrued the Sanitary Laws, and were unaware of the difference between what constitutes a private nuisance, to be dealt with by themselves, and that which is a public nuisance dangerous to health, of which alone the Board takes cognizance. No action was taken upon such complaints, and the reason was explained to the complainants. It is to be feared, however, that some of these were influenced by other motives than a desire to guard their own or the public health from danger. Such conduct is on a par with what has sometimes been discovered in investigating complaints made, in apparent sincerity, by a certain class of persons, and which led me in my last Report to observe that, "In some instances, it was ascertained that there was no foundation for making complaints, and that they were vindictively and

untruthfully made by neighbours, with whom there had been some misunderstanding, and sometimes by tenants against landlords, between whom there had been quarrels about the payment of rent."

52. The town of Port Royal, included in the sanitary district of the City and Parish of Kingston, has received the usual attention of the officers of the Board, and throughout the year, the town has been in the same remarkable state of cleanliness, that has been noticed for some years past. It does not cover a large extent of land, and little time is occupied in walking over the place, and unavoidably observing the cleanly condition of the thoroughfares and of other localities in the Town. This has been done by visitors, persons of respectability and good standing in the community, who from time to time have borne testimony to the clean state in which the Town is kept. It is the result of systematic and efficient scavenging, as well as of careful supervision, although it must be admitted that, unlike what is the case in Kingston, where there is a great amount of traffic and business, there is never at any time in the streets, any extraordinary accumulations of refuse matter, requiring an excessive amount of labour for their removal. Particular attention is given daily to the public latrine and its immediate surroundings, the former being frequently cleansed and limewashed. A representation having been made to the Board of the want of such a place, solely for the use of females, and due consideration having been given thereto, it is satisfactory to know that the erection of such a building will shortly be commenced. This is a proper proceeding, and upon the grounds alone of decency and propriety, will be appreciated by the people of the Town. A new Market House has just been erected, with a well built Landing Place. The former having suitable internal arrangements will not only afford accommodation, but comfort and convenience to persons who may go to the Market, either to vend articles of food or to make purchases, whilst the new Landing Place will be a source of much convenience, and will afford facilities to those who may visit the Town for marketing or other purposes. No doubt that, under prescribed Rules and

Regulations, the market will be kept in an orderly and cleanly state, and that care will be taken that persons who may go there to sell provisions, fruit etc., will not be allowed, as hitherto, to sit and display such articles in the streets, but be compelled to take them into the building. As in Kingston so at Port Royal, there is a proneness among such persons to indulge a habit of the kind, which for sanitary and other reasons should be discouraged and prevented.

53. There is not, as is the case in Kingston, any official registration of sickness at Port Royal, and, therefore, it is impossible to know what has been the sick-rate in the Town, but with the exception of two cases of Yellow Fever that occurred in the Garrison, which proved fatal, there does not appear to have been a case of any other dangerous disease of the Zymotic class. On Saturday, the 2nd June, it was reported from Port Royal, that there was a case of small-pox in the Naval Hospital, and that the patient, a seaman, had been sent there from H. M. S. "Urgent," lying in the Harbour. As I anticipated, the case turned out to be one of Varicella, although, I believe, the Deputy Inspector-General spoke of it afterwards as a case of Varioloid disease. There was, however, no other case in the Town, either at the time or afterwards. Whilst the patient was isolated in the Naval Hospital, a system of quarantine was carried out both at the Hospital and Dock Yard, as well as on board the vessels of war. Cases of Varicella in Kingston were referred to by me in the 51st paragraph of my Report for 1882 and a perusal of it will shew that sometimes a difficulty is experienced in arriving at a correct diagnosis in cases of Varicella.

54. I have obtained from the office of the Registrar-General of Births and Deaths, a statement of the deaths registered at Port Royal during the year. They were 27 in number, and their causes were not dissimilar to those of former years. It must be observed that of the 27 deaths, five were registered as having taken place from Yellow Fever, the only disease of the Zymotic class from which deaths occurred in the Town. The death of a policeman from Erysipelas

was registered. I have been unable to obtain particulars about the case, but the patient was attended by the Deputy Inspector-General. Two of the deaths from Yellow Fever took place in the Garrison in the month of January, and the victims, who were soldiers of the Royal Artillery, were known to be men of imprudent habits and given to intemperance. The remaining three, registered in May, were from H. M. S. "Mallard," one of them a Sub-Lieutenant, the other two, seamen of the vessel. The "Mallard" arrived at Port Royal from Port-au-Prince with these four cases of Yellow Fever on board, and they were taken to the Naval Hospital. An examination of the Return shews that half the number of deaths registered, resulted from incurable organic diseases in persons of advanced age, and a few occurred among young persons and infants. Among the deaths from organic diseases, 5 were registered from Phthisis Pulmonalis. Of these, 1 took place in a person who, at an advanced stage of the disease, went from Kingston to Port Royal for change of air. A death is registered of a seaman who was medically treated, and died on board his vessel (a coal ship) lying in the Harbour, of Acute Pharyngitis. It is therefore fair, in determining the correct death-rate in the Town, to deduct the deaths in 3 cases of Yellow Fever brought to Port Royal in H. M. S. "Mallard," and removed to the Naval Hospital, also the death from Phthisis and that from Acute Pharyngitis. The death-rate would accordingly be 12.7 per thousand of the population. If calculated upon the total number of deaths registered, it would be 15.6 per thousand, and even this would be regarded as a low death-rate, and would indicate a high standard of health in the Town.

55. Reviewing these particulars, as well as others mentioned in my Reports, and seeing that from year to year the rate of mortality has been so low, as in a sanitary point of view, justly to place Port Royal on an equality with if not above important Naval Station Towns in England, it is surprising that any persons could be found, who would have the temerity to represent the place as being unhealthy, and to venture to affirm officially that, on account of certain alleged insanitary conditions, Port Royal is the habitat of

Yellow Fever, and other diseases of the Zymotic class. The death-rate in 1882 was 16.3 per thousand of the inhabitants, and might have been properly reduced if certain other deaths had been taken out of the number registered. This year, it is 42.7 per thousand. Such facts as these attest to the healthiness of the Town, and are sufficient to overthrow any assertions that may be made, or any arguments used to the contrary.

56. Notwithstanding these facts, representations bearing upon the sanitary condition of Port Royal have been made from time to time to the Lords of the Admiralty by the Naval Authorities, and more recently by Commodore Purvis and the late Deputy Inspector-General of the Royal Naval Hospital, and their representations seemed to have reached their culminating point, when on the 29th May, His Excellency the Major-General Administering the Government forwarded to the Local Board of Health a copy of a letter received by His Excellency from Admiral Commerell, dated 9th May, on board the flag ship "Northampton" at Bermuda, with extracts from letters addressed to him by Commodore Purvis and Doctor Fegan, relative to the sanitary condition of Port Royal. These officers having represented that the state of the Town was exceedingly bad, the Lords Commissioners of the Admiralty had directed the Admiral to bring the matter to the notice of His Excellency, with a request that, "after due enquiry, measures may be taken to effectually put a stop to the nuisance complained of, and to cause such precautions to be taken that they may not exist in future."

57. The tendency of the extracts taken from Commodore Purvis' letter was to shew that, on account of certain insanitary conditions, inherent to Port Royal arising from its topography, state of the houses, and habits of the people, the healthiness of the Town could not be secured, and the Commodore concluded his remarks by observing that, "there is no doubt that the origin of several of the cases of Yellow Fever have with reason been traced to men sleeping in the Town."

58. The extracts from Doctor Fegan's letter were as follow:—"I have the honor to report. I know of nothing hav-

ing been done in recent years to improve the sanitary condition of Port Royal, the inhabitants, their habits and habitations outrage the laws of health. I attribute the outbreak of Yellow Fever to cosmic and atmospheric influences which are endemic to Port Royal."

59. A refutation of these grave charges was made in a letter of date 25th June, which I addressed the Board, and having been printed by their direction, copies were forwarded to the Lords of the Admiralty, who acknowledged their receipt. Copies were also sent to the Naval Authorities at Port Royal, to persons of distinction at home, and to leading men in the Island. I believe that a perusal of that letter must have satisfied the Board and readers of it generally, that the allegations preferred by Commodore Purvis and Doctor Fegan were based upon no correct foundation, and that the strongest proofs were afforded that the Town is not only a healthy place, but that, as I stated at the close of that letter, "the death-rate among the inhabitants would compare favorably with that of any seaport town in England, or with any in the West Indies."

60. I would stop here in my remarks about Port Royal, but as Doctor Fegan considered it necessary that he should refute some of the statements I had made in my letter, and justify the opinion he had given about the unhealthiness of the Town, a further correspondence resulted, and it was carried on, until His Excellency Major-General Gamble was about to relinquish the Government of the Colony, at which time, Doctor Fegan's career came to a close as Deputy Inspector-General of the Royal Naval Hospital.

61. It will be remembered that in my Report for 1882, I stated, in the 70th paragraph, that an account had appeared in an English newspaper, to the effect that an epidemic of Yellow Fever had prevailed at Port Royal in that year, but that through the praiseworthy efforts of the Medical staff and the naval authorities, the disease was quickly stamped out. I gave it an unqualified contradiction, and stated that there had been nothing of the kind; and I further remarked that

I made this statement publicly and for the information of the Board, in order that if its correctness be challenged, I may be called upon for its justification.

62. It would occupy too much space, nor do I think it material, as the correspondence is in the possession of the Board, to go over the various matters therein discussed, but in an endeavour to shew that such an epidemic really prevailed in 1882, Doctor Fegan has not strengthened his position by advancing, in addition to the theories he had already put forward, others of a still more absurd character, to shew further causes of the unhealthiness of Port Royal, ignoring the fact that the healthiness of the Town had been incontestably proved. And then with regard to those seamen on board ships of war in the harbour, who were attacked with Yellow Fever, and died of the disease in the Naval Hospital, Doctor Fegan's theory is that they took the disease ashore. In the correspondence in question I have demonstratively shewn that, in reality, at the time they were so attacked, the Naval Establishments were undergoing a strict quarantine, which was enforced by himself, and that no crews of vessels of war were allowed to leave them, and therefore were seen in the Town. This is a fact which can be supported by abundant testimony. The conclusion is that the occurrence at that time of Yellow Fever on board a vessel of war in the harbour was wholly unconnected with any insanitary conditions, alleged by Dr. Fegan to be endemic to Port Royal and favorable to outbreaks of Yellow Fever.

63. It is evident, however, that this epidemic of Yellow Fever was known only to the Deputy Inspector-General. He has attempted, but failed, to give any satisfactory explanation that he caused the fact to be known to the Government. The Health Officer at Port Royal, who, I am informed, had an intimate acquaintance with Dr. Fegan, and was allowed free access to the Naval Hospital, had no knowledge of the epidemic. Neither the Central Board of Health nor the Quarantine Board was furnished with any report from the Naval Authorities or the Health Officer, of the existence

of Yellow Fever in that town during the year 1882. The Local Board of Health never heard of it, until I made allusion in my Report to what had appeared in an English newspaper. As Commissioner of Health I had not the remotest idea of anything of the kind. I made records in that year, of the deaths from Yellow Fever and other diseases that occurred in the Naval Hospital, and had constant official intercourse with Port Royal, but I never heard of an epidemic of Yellow Fever. It has been officially communicated to the Board that, during that year, clean bills of health were issued to all vessels leaving the port of Kingston and Port Royal. It may be further observed that the medical profession in Kingston had no knowledge of such an epidemic, and it is remarkable that I have not met a single inhabitant of Port Royal or Kingston who had ever heard of it. It is the more astonishing that such a profound secret should have been maintained about the epidemic, seeing that it was not characteristic of the Deputy Inspector-General to be passive or indifferent whenever Yellow Fever or any other infectious disease appeared on board vessels of war, and the sick were taken to the Naval Hospital, as the naval establishments were then, as a rule, immediately quarantined, and communication between the vessels of war and the town prevented.

64. Doctor Fegan stated in one of his communications that 7 officers and 43 seamen and marines were treated in the Naval Hospital for Yellow Fever during the epidemic, of which number, 4 died—4 of the officers were of the Staff of the Hospital—15 men came from the Dock Yard—8 men from H. M. S. "Tyrian", that had not been out of the harbour for more than a year, and the remainder from ships lying in the port. With reference to these cases, he undertook to submit a copy of his professional report on the epidemic, giving a history of each case. There was some delay in furnishing it, and in the mean time, Doctor Fegan was requested to state therein, in addition to other information, the dates when the patients were attacked and died or recovered.

65. After the lapse of three months, a statement was

furnished by him, entitled "A detail of the symptoms of cases of Yellow Fever under treatment in the Royal Naval Hospital, Jamaica, 1842." This document, as I observed in a letter to the Board, dated 17th December was, on examination, considered to be highly unsatisfactory, as it lacked information on most important particulars, and there was nothing in it to shew that the fever cases, of whatever type they may have been, had their origin in any cosmic and atmospheric influences endemic to the town. The names of the men and the ships to which they belonged should have been mentioned, when the ships arrived at Port Royal and from what ports they came, if the men had been ashore and if so for what purpose, whether on duty or for pleasure, if any had slept ashore and what were their habits. A brief outline of the medical treatment should have been given, and the dates of recovery as well as of deaths. Similar information should also have been given with regard to the men from the Dock Yard, and to the cases that occurred at the Naval Hospital.

66. Again, it was deemed unsatisfactory, because, as I further stated in the letter, all that could be gathered from the document was, that in many of the cases, numerically recorded, the pathognomonic symptoms of genuine Yellow Fever were wanting, whilst a majority of the patients, some of them natives, seem to have suffered from ordinary fevers, some of a mild and others of a more severe character. The mortality was accordingly low, only 8 per cent, such a percentage of deaths never having been known in any outbreak of Yellow Fever in Jamaica or elsewhere, so far as I am aware. I may state and the facts are on record, that during a severe epidemic of the disease in Kingston in the year 1853, the death-rate in the city was 75 per cent, and at the Public Hospital, nearly 50 per cent.

67. It will here be noticed that of 50 cases of Yellow Fever under treatment, the Deputy Inspector General stated that there were 4 deaths. Looking over his statement, it is seen that he explains that, of the 50, 8 were cases of less intensity, but having well marked symptoms of Yellow

Fever. But it is a remarkable circumstance, that 4 deaths from the disease had been registered by Doctor Fegan, as having occurred in the Naval Hospital during the epidemic, and during the correspondence in question, he stated the same in one of his letters, but in this document, 6 deaths instead of 4 are mentioned, and by way of explanation, the Deputy Inspector-General observes, "of the 6 deaths two were directed by the Medical Director-General to be classified as Yellow Fever." The inference is, that the Medical Director General in England, who never saw the patients, but must have read or heard something of them, was led in two cases to question the correctness of Doctor Fegan's diagnosis, although the said two cases had been under his special observation and care in the Naval Hospital, and had been registered by him as having died from other diseases. With regard to this strange occurrence, I remarked in a letter I addressed the Board, previously referred to, "comment is unnecessary." Even a non-professional person would ask what is the value of a statement purporting to be a record of 50 cases of Yellow Fever treated in the Royal Naval Hospital, when the medical officer in charge should shew such a degree of innocence about two fatal cases that were under his observation, as to have rendered it necessary for the Medical Director-General in England (I presume on perusal of a history of the cases) to direct that they should be "classified as Yellow Fever," although the deaths had been registered here by the Deputy Inspector-General as resulting from other diseases."

68. I still maintain that there was no epidemic of Yellow Fever at Port Royal in 1882, and as I stated at the close of my letter of the 17th December to the Board, "I reiterate, with increased firmness, that there was no epidemic of Yellow Fever at Port Royal in the year 1882, and if Doctor Fegan should still maintain his opinion, I respectfully submit that the matter is of sufficiently grave importance to the reputation of the Colony, as to justify further and rigid enquiry by the Lords of the Admiralty."

69. Arising out of the representations made by the

naval authorities, and my letter in reply of the 25th June, on the sanitary state of Port Royal, a report was made thereon to the Government by Doctor Mosse, C. B., Superintending Government Medical Officer, who by direction of His Excellency the Major-General Administering the Government, had made a personal and most careful inspection of the Town. On the recommendation of Doctor Mosse, His Excellency directed that the Board might be asked whether they would consider a good arrangement to appoint the Sergeant-Major of Constabulary at Port Royal an Inspector of Nuisances. The matter was duly considered by the Board, and he was so appointed. Before this decision was arrived at, the correspondence was referred to me for remarks, and with reference to the appointment, I stated in a communication to the Board that, "the suggestion of His Excellency that the Sergeant-Major of Constabulary should be appointed Inspector of Nuisances, if carried out, is calculated to benefit Port Royal materially. It is not practicable for the Inspectors in Kingston to give that close, daily attention to duties which this officer who is resident at Port Royal can do. He has for years given very valuable aid to the Sanitary Officers, and if his status were officially recognised, I think it would lend greater weight to his authority in these matters."

70. Doctor Mosse also made suggestions in his Report, with regard to some other matters of a more or less insanitary tendency, and he advised that action should be taken for their prevention or removal, but he nowhere suggested that the cases of Yellow Fever, that had occurred in the Town, might have arisen from the condition of things he saw, but on the contrary, practically shewed that he found nothing to induce him to think so.

71. Having endeavoured to shew that the allegations made by Commodore Purvis and the Deputy Inspector-General were not founded on facts or careful observation— and it may be, not on sufficient knowledge of the subject with which they ventured to deal—and having pointed out that no proof has been afforded that Yellow Fever is endemic to

Port Royal, and that no epidemic of the disease prevailed in the Town in 1882, I take the liberty of introducing here, the following important remarks made by Doctor Mosse in his Report : " Having had the advantage of perusing the remarks of the Health Commissioner, in the correspondence which has arisen on the Reports of the Senior Naval Officer and Deputy Inspector-General of Hospitals, R. N., with special reference to the presence of Yellow Fever there, I feel that I can add but little to the array of facts so concisely set forth by Doctor Scott, and which to my mind clearly refute the erroneous impression that the disease is always endemic. The history of the few fatal cases registered under that head during 1882-83, the period under discussion, points to their introduction from without. Had the persons whose deaths were so recorded, remained on board their respective ships, instead of being received into the Naval Hospital, the healthiness of the station could not have been impugned. The presence of an occasional case of this or other malignant disease cannot be regarded as tantamount to an epidemic."

72. It does not occur to me that there is any other matter in connection with the sanitary state of Kingston which it is necessary for me to bring to the notice of the Board. Upon material and more prominent questions, I think I have dwelt sufficiently, and although I have not enumerated various matters touched upon in previous Reports, which are among those that give rise in greater or less degree to insanitary conditions, but which cannot now be dealt with by the Sanitary Officers, I have asked the Board to keep them in view, and give them equal attention. I would strongly advise that the present City Regulations be early and carefully looked over and revised. If this were done, many irregularities and abuses would, under Municipal action be got rid of, and various sanitary defects be effectually dealt with by the Sanitary Board. There is not such a high conception among the masses of the people, with regard to what constitutes order, propriety and cleanliness about their households, as to make it a matter of indifference, whether or not there are proper and effective Municipal and Sanitary Regulations. I would simply remark that a great ob-

stacle in the way of improvement and advancement in Municipal and Sanitary matters is the absence and want of such Regulations. As I stated in one of my Reports, I shall be willing, at any time I may be called upon, to give to the Municipal Board, when framing such Regulations, such information as I may have derived from experience and observation.

73. I have now to remark that the Inspectors of Nuisances have performed their duties actively and efficiently. Sanitary Officers, from the nature of the duties they have to perform, are not, as a rule, popular in communities, but it is satisfactory to state that the Inspectors have managed to get through a large amount of work, without incurring the ill-will or displeasure of householders in the city.

74. I close this Report with an expression of my continued desire to do all that is possible to bring about the best sanitary state of Kingston, feeling that this is essential to the health, comfort and welfare of the inhabitants.

I have the honor to be,
Sir,

Your obedient servant,

JAMES SCOTT,
Commissioner of Health.



A—Summary of Work &c., performed under Law 6 of 1867 from the 1st day of January, to the 31st December, 1883, under the special direction and supervision of the Inspectors of Nuisances for the Parish of Kingston.

MONTHS.											
	No Sweepers employed.	No. of Carts employed.	No. of Loads removed by Carts.	No. of foul yards cleaned.	No. of enclosed Lots cleaned.	No. of unenclosed Lots cleaned.	No. of Cesspools cleaned in Streets and Lanes.	No. of Cesspools abandoned in Streets and Lanes.	No. of yards inspected.	No. of Latrines cleaned by notices and orders.	No. of Latrines cleaned by verbal orders.
January.....	215	162	1,596	7	1	1	.....	2	59	4	6
February.....	200	141	1,481	4	.....	1	.....	.....	50	4	6
March.....	204	150	1,340	3	1	1	.....	.....	78	17	11
April.....	208	150	1,477	3	2	1	.....	.....	70	14	14
May.....	197	137	1,267	3	.....	12	.....	.....	61	10	11
June.....	196	136	1,222	8	.....	12	.....	.....	71	5	7
July.....	203	156	1,349	2	2	3	.....	.....	71	8	9
August.....	216	162	1,605	8	2	11	.....	1	56	8	6
September.....	205	150	1,454	1	.....	9	.....	.....	26	5	6
October.....	216	162	1,610	3	.....	12	.....	.....	16	4	5
November.....	208	156	1,388	6	.....	10	.....	.....	22	11	7
December.....	208	156	1,430	6	1	11	.....	.....	15	5	2
Total.....	2,481	1,872	18,409	60	9	101	2	3	538	100	98
											5,332

B.—Rainfall registered at No. 78 East Street, Kingston, from the 1st of January to 31st December, 1883.

January.....	2.80	inches.
February.....	.22	"
March.....	3.02	"
April.....	.33	"
May.....	1.52	"
June.....	2.30	"
July.....	1.14	"
August.....	6.85	"
September.....	4.43	"
October.....	4.38	"
November.....	4.76	"
December.....	.22	"
Total.....		31.97 inches.

JAMES SCOTT, Commissioner of Health,

C.—Return shewing the names of persons prosecuted by the officers of the Local Board of Health of Kingston, under Law 6 of 1867, from the 1st day of January to the 31st December 1883.

NAME.	RESIDENCE.	OFFENCE.	DATE OF TRIAL.	RESULT.
Walter G. Hendriks.	76 Water Lane.	Not complying with no-15th, May. tree and order to clean latrine. Not net deodorizing night 21st. May. soil, removed from the Public Hospital.		Fined 20/.
John Stephenson.	—	Not complying with no-20th, June. tree and order to clean latrine.		Fined 5/, place of Residence not known.
Mary Anne Gordon.	63 Water Lane.	Burying contents of privy 21st. July. in a private yard.		Fined 20/.
Susan Williams.	Water Lane.			Case withdrawn, the night soil hav- ing been removed and taken to the place of deposit. Dismissed.
David Aguiar.	Princess Street.	Exposing rotten salt fish 2nd, August. for sale.		
Charles Small.	—	Carrying stable manure in 8th, November. an open dray, dropping some in the Street, and refusing to have it re- moved.		Fined 21/.

JAMES SCOTT, Commissioner of Health.

D.—Return of Complaints made by Householders, and others
of Nuisances in the City of Kingston, from the 1st January to the 31st December 1883.

Foul Privies.....	16
Premises without water closet—insanitary consequences.....	1
Stagnant water and mud in the thoroughfares.....	5
Noxious water in the Street from the cleaning of tripe..	1
Noxious water thrown from premises into the Streets.	1
Foul water allowed to run into a neighbour's premises..	1
Foul emanations from premises, through cleaning of tripe.....	1
Carcass in the Streets.....	1
Foul emanations from stable yards.....	2
Unenclosed lots of land with much vegetation, and receptacles for filth.....	4
Insanitary condition of the Town of Port Royal.....	1
Foul condition of Chancery Lane.....	1
Refusal of cartmen to remove sweepings from premises.....	1
Insanitary condition of Lower Princess Street.....	2
Foul condition of land in neighbourhood of Railway..	1
Intention to erect a brick-kiln, and to burn bricks in the neighbourhood of a resident householder.....	1
Foul condition of burial grounds.....	2
Stagnant water kept on certain premises.....	1
Rubbish and filth kept on an unenclosed lot of land in the burnt district.....	1
Offensive smells near the sea-beech (Eastward).....	1
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Total.....	45

JAMES SCOTT, Commissioner of Health.

